Claims:

1   1.   In a wireless communication system including a

2   plurality of wireless communication system network components

3   intercoupled by a wired network, a method for distributing a

4   file from a network component acting as a sender to a

5   plurality of network components acting as receivers, the

6   method comprising:

7   the sender establishing a multicast session with the

8   plurality of receivers;

9   the sender subdividing the file into a plurality of data

10 packets;

11   the sender multicasting the plurality of data packets to

12 the plurality of receivers;

13   at least some of the plurality of receivers failing to

14 correctly receive all of the plurality of data packets;

15   the at least some of the plurality of receivers failing

16 to correctly receive all of the plurality of data packets

17 error reporting to the sender of the plurality of data

18 packets; and

19   the sender transmitting a plurality of previously

20 incorrectly received data packets of the plurality of data

21 packets to the at least some of the plurality of receivers.

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1   2.   The method of claim 1, wherein the sender is a base

2   station manager.

1   3.   The method of claim 1, wherein the receivers are

2   base station controllers.

1   4.   The method of claim 1, wherein the receivers are

2   base stations.

1   5.   The method of claim 4, wherein:

2   the base stations operate according to a code division

3   multiple access wireless operating standard; and

4   the base stations load the file onto a plurality of

5   processing cards contained within the base stations.

1   6.   The method of claim 1, wherein:

2   the plurality of receivers comprise a group of network

3   components requiring a software update; and

4   the file comprises the software update.

1   7.   The method of claim 1, wherein error reporting to

2   the sender comprises:

3   the sender transmitting an error status request to the

4   plurality of receivers; and

5   at least one of the plurality of receivers responding to

6   the sender with an error message.

1   8.   The method of claim 1, wherein error reporting to

2 the sender comprises:

3   the sender sends an error status request to a first

4 plurality of receivers during a first time period;

5   the sender sends an error status request to a second

6 plurality of receivers during a second time period; and

7   wherein the first time period is different from the

8 second time period.

1   9.   The method of claim 1, wherein transmitting a

2 plurality of previously incorrectly unreceived data packets

3 of the plurality of data packets to the at least some of the

4 plurality of receivers comprises:

5   the sender determining a subset of receivers that failed

6 to correctly receive all of the plurality of data packets;

7   the sender of the file determining a corresponding set

8 of data packets that were not previously incorrectly received

9 by the subset of receivers; and

10   the sender of the file multicasting the corresponding

11 set of data packets to the subset of receivers.

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1   10.   A system for distributing a file within a wireless

2 communication network, the system comprising:

3   a server network component of the wireless communication

4 network, the server network component comprising:

5   a processor;

6   a memory coupled to the processor; and

7   a network interface coupled to the processor;

8   a plurality of receiver network components of the

9 wireless communication network, each of the receiver network

10 components comprising:

11   a processor;

12   a memory coupled to the processor; and

13   a network interface coupled to the processor; and

14   a plurality of software instructions executable by the

15 sender network component and the plurality of receiver

16 network components, the plurality of software instructions

17 comprising:

18   a first set of sender software instructions that,

19 when executed by the processor of the sender, causes the

20 sender to establish a multicast session with the plurality of

21 receiver network components;

22   a first set of receiver software instructions that,

23 when executed by a receiver, causes the receiver to interact

24 with the sender to join the multicast session;

25   a second set of sender software instructions that,

26 when executed by the processor of the sender, causes the

27 sender to subdivide the file into a plurality of data

28 packets;

29   a third set of sender software instructions that,

30 when executed by the processor of the sender causes the

31 sender to multicast the plurality of data packets to the

32 plurality of receivers;

33   a second set of receiver instructions that, when

34   executed by the processor of a receiver that fails to

35   correctly receive all of the plurality of data packets,

36   causes the receiver to error report to the sender; and

37   a fourth set of sender software instructions that,

38   when executed by the processor of the sender, causes the

39   sender to transmit a plurality of incorrectly received data

40   packets of the plurality of data packets to the receiver that

41   fails to correctly receive all of the plurality of data

42   packets.

1   11.   The system of claim 10, wherein the sender is a

2   base station manager.

1   12.   The system of claim 10, wherein the receivers are

2   base station controllers.

1   13.   The system of claim 10, wherein the receivers are

2   base stations.

1   14.   The system of claim 13, wherein:

2   the base stations operate according to a code division

3   multiple access wireless operating standard; and

4   the base stations load the file onto a plurality of

5   processing cards contained within the base stations.

1   15.   The system of claim 10, wherein:

2   the plurality of receivers comprise a group of network

3 components requiring a software update; and

4   the file comprises the software update.

1   16. The system of claim 10, further comprising:

2   a fifth set of sender software instructions that, when

3 executed by the processor of the sender, causes the sender to

4 transmit an error status request to the plurality of

5 receivers; and

6   a sixth set of sender software instructions that, when

7 executed by the processor of the sender, causes the sender to

8 receive an error status response from at least some of the

9 plurality of receivers.

1   17. The system of claim 11, wherein the fifth set of

2 sender software instructions further causes:

3   the sender to transmit an error status request to a

4 first plurality of receivers during a first time period;

5   the sender to transmit an error status request to a

6 second plurality of receivers during a second time period;

7 and

8   wherein the first time period is different from the

9 second time period.

1   18. The system of claim 10, further comprising a fifth

2 set of sender instructions that, when executed by the

3 processor of the sender, causes the sender to:

4   determine a subset of receivers that failed to correctly

5   receive all of the plurality of data packets;

6   determine a corresponding set of data packets that were

7   not correctly received by the subset of receivers; and

8   multicast the corresponding set of data packets to the

9   subset of receivers.

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1   19. A system for distributing a file within a wireless

2   communication network, the system comprising:

3   a server protocol suite operating on a sender component

4   of the wireless communication network;

5   a plurality of receiver protocol suites operating on a

6   plurality of receiver network components of the wireless

7   communication network, wherein each of the plurality of

8   receiver network components is communicatively coupled to the

9   sender component;

10   wherein the server protocol suite causes the sender to

11   establish a multicast session with the plurality of receiver

12   network components;

13   wherein the receiver protocol suite causes the plurality

14   of receivers to interact with the sender to join the

15   multicast session;

16   wherein the server protocol suite causes the sender to

17   subdivide the file into a plurality of data packets;

18   wherein the server protocol suite causes the sender to

19   multicast the plurality of data packets to the plurality of

20   receivers;

21   wherein the receiver protocol suite causes the plurality

22   of receivers to error report to the sender; and

23   the server protocol suite causes the sender to transmit

24   a plurality of incorrectly received data packets of the

25   plurality of data packets to a receiver that fails to

26   correctly receive all of the plurality of data packets.

1   20.   The system of claim 19, wherein the sender is a

2   base station manager.

1   21.   The system of claim 19, wherein the receivers are

2   base station controllers.

1   22.   The system of claim 19, wherein the receivers are

2   base stations.

1   23.   The system of claim 22, wherein:

2   the base stations operate according to a code division

3   multiple access wireless operating standard; and

4   the base stations load the file onto a plurality of

5   processing cards contained within the base stations.

1   24.   The system of claim 19, wherein:

2   the plurality of receivers comprise a group of network

3   components requiring a software update; and

4   the file comprises the software update.

1   25.   The system of claim 19:

2   wherein the server protocol suite causes the sender to

3   transmit an error status request to the plurality of

4   receivers; and

5   wherein the receive protocol suite causes each of the

6   plurality of receivers to respond to the sender with an error

7   status response.

1   26. The system of claim 19, wherein the server protocol

2   suite causes the sender to:

3   transmit an error status request to a first plurality of

4   receivers during a first time period;

5   transmit an error status request to a second plurality

6   of receivers during a second time period; and

7   wherein the first time period is different from the

8   second time period.

1   27. The system of claim 19, wherein the server protocol

2   suite causes the sender to:

3   determine a subset of receivers that failed to correctly

4   receive all of the plurality of data packets;

5   determine a corresponding set of data packets were not

6   correctly received by the subset of receivers; and

7   multicast the corresponding set of data packets to the

8   receivers comprising the subset of receivers that failed to

9   correctly receive all of the plurality of data packets.